BS in Biomedical Sciences
BMED: Lab Mission 2
Course Equivalency: 1111
Spring 2016: 1/18–5/12

***This syllabus represents the current course plans and objectives. As we go through the semester, those plans may need to change to enhance the class learning opportunity. Such changes, communicated clearly, are not unusual and should be expected.*

TEXTBOOK AND/OR RESOURCE MATERIAL

All required content for this course is paid for via course fees and is delivered via iPad, which will be issued to you at your orientation meeting for the program. This learning material will include carefully curated readings, video, interactives, animations, apps, and other sources.

The following materials, and many others, are included:

- PhysioEX--This laboratory simulation software, available on CD-ROM in the laboratory, will allow you to perform simulated experiments, test hypotheses, and record data so that you can better understand the physiological processes you are studying.
- OSCE Skills App--This app gives you step-by-step illustrated instructions for a large number of Objective Structured Clinical Examinations of the kinds used to test future doctors on their competence in performing clinical skills.
- Anatomy & Function App--This app has comprehensive images, animations, and explanations of human anatomy and physiology. Use this to prepare for your laboratory activities, check your work, and study for assessments. The Notecard feature allows you to turn this app into a dynamic study tool.
- Medical Dictionary by Farlex App--This tool allows you look up comprehensive definitions of medical terminology, word parts, and topics. This is a rich tool to which you will likely refer throughout your studies and career.

COURSE DESCRIPTION AND PREREQUISITES

Welcome to the next step of your journey into the world of the biomedical sciences. As you reach each of your learning goals, you will develop the knowledge and skills needed for future courses. You will also learn what the professionals in the field know about medicine and the inner workings of the human body. It will be a fascinating trip through one of the fastest growing areas of scientific study. In this mission, you will study:

- The Nervous System
- The Musculoskeletal Systems
- The Cardiovascular Respiratory Systems and the Blood
- The Endocrine & Reproductive Systems

- The Urinary and Renal Systems
- The Gastrointestinal System

LEARNING OBJECTIVES/OUTCOMES FOR THE COURSE

As you complete the activities in this course, you will work toward demonstrating competence in each of these programmatic objectives:

- Apply knowledge of biology in defining and discussing basic biomedically-related science concepts. (Level 1)
- Describe the structure and function of the body and explain the basis of major pathologies and diseases at the molecular, cellular, organ, and system levels. (Level 1)
- Critically examine the science behind disease prevention and health promotion, especially as related to common chronic conditions. (Level 1)
- Recall the most relevant equations used in the biomedical sciences, describe the phenomenon they explain, and cite how and when they are applied. (Level 1)
- Describe the social and environmental determinants of health and their influences on healthcare and biomedical research; discuss related impacts on individuals, communities, and populations–regionally, nationally, and globally. (Level 1)
- Demonstrate a desire to help others as well as sensitivity to others' needs and feelings. (Level 1)
- Demonstrate knowledge of socio-cultural factors that affect interaction and behaviors, multiple dimensions of diversity, and strategies for interacting effectively with people from diverse backgrounds. (Level 1)
- Demonstrate ability to collaborate with others to achieve shared goals. (Level 1)
- Behave in an honest and ethical manner; cultivate personal and academic integrity; adhere to ethical principles; follow rules and procedures. (Level 2)
- Consistently fulfill obligations in a timely and satisfactory manner; take responsibility for personal actions and performance. (Level 2)
- Set goals for continuous improvement and for learning new concepts and skills; solicit and respond appropriately to feedback. (Level 2)
- Appropriately utilize campus, community, and other resources to aid in success in the university setting, including progressive awareness of how and when to seek academic assistance or other professional support. (Level 2)

GRADING POLICIES

You will demonstrate your achievement of program competencies by completing the following types of activities. You must receive at least a 70% to receive credit for demonstrating competence. The entire mission is worth 1,000 points.

You will complete the following kinds of activities as you work your way through the mission:

Lab Reports

To deepen your knowledge of human physiology perform simulated experiments or explorations and write up reports detailing your discoveries. You will perform **10** lab report activities each worth *15 points* for a total of 15% of your grade.

Microscopic Anatomy

Use the laboratory microscopes to examine slides of human anatomy and submit descriptions and drawings of your observations. You will perform **9** microscopic activities each worth *16-17 points* for a total of 15% of your grade.

Dissection Reports

Dissection activities give you hands on experience with internal organs. You will perform dissections of sheep brains and hearts and submit reports explaining your findings. You will perform **two** dissections each worth *75 points* for a total of 15% of your grade.

Apply Your Knowledge

In addition to your lab experience, you will have opportunities to apply your knowledge in online simulations, physical exam practice, and other hands on activities. You will submit evidence of your performance of these activities for evaluation. You will have **three** apply your knowledge activites each will be worth *50 points* for a total of 15% of your grade.

End of Mission Exams cover all the content in the Mission, and are taken after you have successfully completed all of the activities in the Mission and reviewed what you have learned. You will take this exam in class and not on TEx. *You can earn up to 400 points on the exam for a total of 40% of your final grade.* **No retake of the End of Mission Exam will be allowed.**

STAYING ON TRACK

The TEx app on your iPad will help you keep track of your schedule of activity due dates and will let you know if you begin to get off track. Your Instructional Facilitator and Instructors will also be monitoring your work and are there to help you; contact them immediately if you start to struggle. If you get behind, don't give up—work with them to make a plan to get back on track.

ABSENCE AND MAKEUP POLICY

Coached Study Hours and Class Activities are mandatory.If an excused absence is unavoidable and legitimate, at the Instructor’s sole discretion, students may complete an alternate assignment.

CALENDAR OF EVENTS

The UTRGV academic calendar can be found at http://my.utrgv.edu at the bottom of the screen, prior to login. Important dates for Spring 2016 include:

January 18 MLK Day

January 18 Classes begin

Feburary 3 Census Day

March 14- 18 Spring Break

April 13 Drop/ Withdrawal Deadline

May 5 Study Day; no classes

May 6- 12 Final Exams

Date	Day	Activity	Points	Contact
1/18	Monday	MLK Day		
Module 1: Integrated Body Systems 1: Nervous System, Integumentary/Musculoskeletal System and Cardiovascular Pulmonary Systems				
Week 1	Lab	Physiology of the nervous system	15	
	Lab	Microscopic Anatomy of the Nervous System	17	
Week 2	Lab	Sheep brain dissection report	75	
	Lab	Microscopic Anatomy of the Brain	17	
Week 3	Lab	Apply your Knowledge: Receptors and Reflexes	50	
Week 4	Lab	Applying your Knowledge: Build a Skeleton	50	
	Lab	Microscopic Anatomy of the Bone Tissue	17	
Week 5	Lab	Physiology of the muscle tissue	15	
	Lab	Microscopic Anatomy of the Muscle Tissue	17	
Week 6	Lab	Sheep Heart Dissection Lab Report	75	
	Lab	Apply Your Knowledge: The Electrocardiogram	50	
Week 7	Lab	Cardiovascular Physiology I	15	
	Lab	Cardiovascular Physiology II	15	
Week 8	Lab	Physiology of the Respiratory System	15	
	Lab	Microscopic Anatomy of Respiratory system	17	
3/14	Monday	Spring Break		
3/15	Tuesday	Spring Break		
3/16	Wednesday	Spring Break		
3/17	Thursday	Spring Break		

3/18	Friday	Spring Break		
Module 2: Integrated Body Systems 2: Gastrointestinal System, Urinary/Renal Systems, Endocrine/Reproductive Systems				
Week 10	Lab	Physiology of the endocrine system	15	
Week 11	Lab	Microscopic Anatomy of the endocrine system	17	
Week 12	Lab	Reproductive system Report	15	
	Lab	Microscopic Anatomy of the reproductive system	16	
Week 13	Lab	Acid-Base Balance	15	
Week 14	Lab	Physiology of the Renal System	15	
	Lab	Microscopic Anatomy of the Renal System	16	
Week 15	Lab	Microscopic Anatomy of the GI System	16	
Week 16	Lab	Physiology of the Chemical and Physical Process of Digestion	15	
		Final Exam	400	
		Total Points	1000	

UTRGV POLICY STATEMENTS

Students With Disabilities:
If you have a documented disability (physical, psychological, learning, or other disability which affects your academic performance) and would like to receive academic accommodations, please inform your instructor and contact Student Accessibility Services to schedule an appointment to initiate services. It is recommended that you schedule an appointment with Student Accessibility Services before classes start. However, accommodations can be provided at any time. Brownsville Campus: Student Accessibility Services is located in Cortez Hall Room 129 and can be contacted by phone at (956) 882-7374 (Voice) or via email at accessibility@utrgv.edu. Edinburg Campus: Student Accessibility Services is located in 108 University Center and can be contacted by phone at (956) 665-7005 (Voice), (956) 665-3840 (Fax), or via email at accessibility@utrgv.edu.

Mandatory Course Evaluation Period:
Students are required to complete an ONLINE evaluation of this course, accessed through your UTRGV account (http://my.utrgv.edu); you will be contacted through email with further instructions. Students who complete their evaluations will have priority access to their grades.

Attendance:
Students are expected to attend all scheduled classes and may be dropped from the course for excessive absences. UTRGV's attendance policy excuses students from attending class if they are participating in officially sponsored university activities, such as athletics; for observance of

religious holy days; or for military service. Students should contact the instructor in advance of the excused absence and arrange to make up missed work or examinations.

Scholastic Integrity:
As members of a community dedicated to Honesty, Integrity and Respect, students are reminded that those who engage in scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and expulsion from the University. Scholastic dishonesty includes but is not limited to: cheating, plagiarism, and collusion; submission for credit of any work or materials that are attributable in whole or in part to another person; taking an examination for another person; any act designed to give unfair advantage to a student; or the attempt to commit such acts. Since scholastic dishonesty harms the individual, all students and the integrity of the University, policies on scholastic dishonesty will be strictly enforced (Board of Regents Rules and Regulations and UTRGV Academic Integrity Guidelines). All scholastic dishonesty incidents will be reported to the Dean of Students.

Sexual Harassment, Discrimination, And Violence:
In accordance with UT System regulations, your instructor is a "responsible employee" for reporting purposes under Title IX regulations and so must report any instance, occurring during a student's time in college, of sexual assault, stalking, dating violence, domestic violence, or sexual harassment about which she/he becomes aware during this course through writing, discussion, or personal disclosure. More information can be found at www.utrgv.edu/equity, including confidential resources available on campus. The faculty and staff of UTRGV actively strive to provide a learning, working, and living environment that promotes personal integrity, civility, and mutual respect in an environment free from sexual misconduct and discrimination.

Course Drops:
According to UTRGV policy, students may drop any class without penalty earning a grade of DR until the official drop date. Following that date, students must be assigned a letter grade and can no longer drop the class. Students considering dropping the class should be aware of the "3-peat rule" and the "6-drop" rule so they can recognize how dropped classes may affect their academic success. The 6-drop rule refers to Texas law that dictates that undergraduate students may not drop more than six courses during their undergraduate career. Courses dropped at other Texas public higher education institutions will count toward the six-course drop limit. The 3-peat rule refers to additional fees charged to students who take the same class for the third time.